The Hull & Structure Course:
Elective Classes Training Syllabus
# TABLE OF CONTENTS

**Profile Plots** .................................................................................................................. 1

OVERVIEW ............................................................................................................................... 1
Setting Trimmed or Untrimmed Profile Length to use in Profile Plots ........................................ 1
PRODUCTION AND REPORTS .................................................................................................. 1
CHECKING AND UPDATING PROFILE PLOTS ........................................................................ 1

**Profile Nesting** .................................................................................................................. 2
What Does Profile Nest Do? ..................................................................................................... 2
NESTING PROFILE PARTS ....................................................................................................... 2
REPORTING PROFILE NESTS .................................................................................................. 2
CHECKING AND UPDATING PROFILE PLOTS ........................................................................ 2

**Marine Drafting** ................................................................................................................ 3
Introduction to MarineDrafting ................................................................................................. 3
MarineDrafting Setup ............................................................................................................... 3
Creating MarineDrafting Drawings ........................................................................................ 3
Creating MarineDrafting Views ............................................................................................... 3
Generating MarineDrafting Views .......................................................................................... 4

**Plate Nesting** ..................................................................................................................... 5
What is Plate Nest Designed For? ............................................................................................ 5
AUTOMATIC NEST .................................................................................................................... 5
MANUAL NEST .......................................................................................................................... 5
LABELING NESTED PARTS ..................................................................................................... 6
REMNANTS ............................................................................................................................... 6
EXPORT TO NC-PYROS ........................................................................................................... 6
IMPORT FROM NC-PYROS ........................................................................................................ 6
HANDLING CHANGE TO THE 3D MODEL ............................................................................ 6
UTILITIES ................................................................................................................................ 6

**NC-Pyros** ............................................................................................................................ 7
What is NC-Pyros For? ............................................................................................................. 7
SHIPCONSTRUCTOR AND NC-PYROS INTERACTION .......................................................... 7
SETTING UP NC-PYROS ......................................................................................................... 7
CREATING CUTTING PATHS AND CNC FILES ...................................................................... 7
FEEDBACK INTO SHIPCONSTRUCTOR .................................................................................. 8

PLEASE NOTE: COURSE CONTENT IS SUBJECT TO CHANGE
Profile Plots

OVERVIEW
1. Generating Profile Plots
2. Templates

Setting Trimmed or Untrimmed Profile Length to use in Profile Plots
1. Definitions
2. Cases Where the Lengths Differ
3. Endcuts and Cutouts on Trimmed Ends
4. Things Affected by the Trimmed Length
5. Multiple Trims on the Same End
6. Green

PRODUCTION AND REPORTS
1. Cutouts in Profile Parts
2. Profile Bends
3. Profile Nests and Profile Plots Project Settings
4. Creating Profile Plot
5. Grouping Profiles in the Same Plot
6. Tools - Printing Profile Plots
7. Tools - Profile Plot List

CHECKING AND UPDATING PROFILE PLOTS
1. Checking Profile Drawing
2. Updating Profile Plots
3. Updating BOMs
Profile Nesting

What Does Profile Nest Do?
1. Differences between Profile and Plate Nest

NESTING PROFILE PARTS
1. The Stock Library
2. Inventory
3. Nest Parameters
4. Nesting profile Parts
5. Selecting Parts and Filtering Selections
6. Nesting Parts
7. Un-nesting parts
8. Status of Nest

REPORTING PROFILE NESTS
1. Pre-defined Reports
2. Customizing Reports

CHECKING AND UPDATING PROFILE PLOTS
1. Checking Profile Nests
2. Automatic Check
3. Manual Check
4. Updating Profile Nests
5. Re-nesting
Marine Drafting

Introduction to MarineDrafting

1. Overview
2. Concepts
3. Output Drawing
4. MarineDrafting Drawing
5. Output Page in Navigator
6. MarineDrafting View
7. 2D View
8. Reference Line

MarineDrafting Setup

1. Layers
2. Blocks
3. Text Styles for MarineDrafting
4. Linetypes
5. Reference Line Styles
6. Set up View Creation Settings

Creating MarineDrafting Drawings

1. Overview
2. Creating MarineDrafting Drawings
3. The Production Drawings Revision Palette
4. Show Out-of-Date Parts

Creating MarineDrafting Views

1. Overview
2. Creating Views
3. Manual View Creation
4. Automatic View Creation
Generating MarineDrafting Views

1. Generating a View
2. Manual Detailing
3. Label a MarineDrafting Drawing
4. Part Property Labelling
5. Updating a View
6. Examine Changes to MarineDrafting Drawing
7. Move a Drawing
8. Add a Reference Line after 2D View was Created
Plate Nesting

What is Plate Nest Designed For?

1. Manual and Automatic Nest General Behaviors
2. Nest and Nest Drawing Template
3. Defining the Border
4. Inserting Keywords
5. Inserting a BOM

AUTOMATIC NEST

1. Creating Nest Drawing
2. Selecting parts for Nesting
3. Nesting Type – Manual/Automatic
4. Filtering Parts
5. Nesting of Flatbars
6. Nesting of Fabricated Profiles
7. Using Multiple Product Hierarchies
8. Selecting Stock Plates
9. Remnant Usage
10. Advanced Options
11. Using Optimizer
12. Nest Layout
13. Re-nest Parts in a Nest

MANUAL NEST

1. Creating a Blank Nest
2. Manual Parts Inserting
3. EDITING TOOL
4. Snapping Parts
5. Aligning Parts
6. Autorotate
7. Move/Rotate
8. Sliding Parts
9. Modifying Nests after AutomaticNest
10. Bridging Nested Parts
11. Changing Bridge Widths

LABELING NESTED PARTS

REMNANTS
1. Remnants
2. Creating Remnants
3. Labeling Remnants
4. Editing/Deleting Remnants

EXPORT TO NC-PYROS

IMPORT FROM NC-PYROS

HANDLING CHANGE TO THE 3D MODEL
1. Updating Parts in the Nest Drawing

UTILITIES
1. Check Nest Drawings and Re-insert Out-of-date Parts
2. Identifying Unassigned Assembly Parts
3. Listing and searching parts
4. Exporting Nest Parts to DWG/DXF
5. Plotting Nests
6. Nest Collision Check
7. Nest Manager
NC-Pyros

What is NC-Pyros For?
1. NC-Pyros features

SHIPCONSTRUCTOR AND NC-PYROS INTERACTION
1. Exporting Nests to NC-Pyros
2. Why we need to Export
3. Export Options

SETTING UP NC-PYROS
1. NC-Pyros Configuration
2. Controller files
3. Location of the files
4. Creating/Modifying Controller Files
5. PRF File – NC-Pyros Configuration
6. Setting and Modifying Preferences

CREATING CUTTING PATHS AND CNC FILES
1. Creating a New Cutting path
2. Generating Shapes
3. Autopath – Marking or Complete
5. Setting the Start of the Shape
6. Deleting Shapes
7. Reversing Shapes
8. Manually Connecting Shapes
9. Inserting Tabs
10. Inserting/Removing Corner Bevel Loops
11. Inserting Bevel Loops
12. Removing Bevel Loops
13. Modifying a Cutting Path
14. Modifying Leads
15. Rerouting Fast Travel
16. Checking Procedures
17. Checking Open Shapes
18. Checking Lead Collisions
19. Simulating Cutting Process
20. Backplotting NC Code
21. Placing Calibration Marks
22. Creating the NC Code File

FEEDBACK INTO SHIPCONSTRUCTOR
1. Nest Templates and Keywords
2. Retrieving Information from NC-Pyros